

## REMARKS

Claims 1-16 are pending in the application.

### I. TRAVERSE OF THE OBVIOUSNESS REJECTION OF CLAIMS 1-14

Claims 1-14 stand rejected by the examiner for being obvious over Brastad et al. (USP 4,230,924) in view of Walters (USP 5,256,846). It is the examiner's position that Brastad et al. discloses all of the features of the claimed invention except for certain methods of making the package as well as the dimension of the metal patches.

As an initial matter it is noted that the examiner, in withdrawing the initial claim rejection over Brastad et al. has apparently acknowledged that:

- Brastad et al do not teach the limitation of the characteristic dimension of the metal patch elements to no greater than about 500 $\mu$ m as recited in claim 1;
- Brastad et al failed to appreciate the significance of this patch size limitation for microwave transparency in the case of contact of the material with a foodstuff being heated (as discussed in the first paragraph on page 4 of the application); and
- Brastad et al do not teach that the material should comprise a frequency selective surface that is adapted to reflect thermal infrared radiation and that the combined emissivity of the substrate and patch elements should be no greater than about 0.8 in the thermal infrared waveband, both as recited in claim 1.

Thus, the features missing from Brastad et al. must be found in Walters or the examiner has not made out a *prima facie* case of obviousness.

Pending claims 1-14 of the present application are non-obvious and allowable for each of following reasons:

- The Examiner has not made out a *prima facie* case of obviousness;
- The combination of references does not result in the claimed invention;
- The examiner's inherency position is legally flawed; and
- One skilled in the art at the time of the invention would not have considered Walters.

#### A. The Examiner Has Not Established A *Prima Facie* Case Of Obviousness

Pending application claims 1-16 are patentable over the prior art of record because the Examiner has not made out a *prima facie* case of obviousness of the claims over Brastad et al in

view of Walters. During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Appellant is entitled to the patent. *See In re Glaug*, 62 USPQ2d 1151 (Fed. Cir. 2002). In the instant application, Claims 1-14 are patentable at least because the cited prior art does not disclose or suggest the claimed patch dimensions.

The examiner acknowledges that Brastad et al. does not disclose the claimed patch dimensions. The examiner instead relies upon Walters for providing the missing teaching. Walters teaches a wide range of metal patch sizes. According to Walters “The reflective elements can range from about 3.0mm to about 20mm on a side” (column 4, lines 49-50), that is to say from about 3,000 $\mu$ m to about 20,000 $\mu$ m. However, the recited Walters dimensions do not even come close to encompassing the pending claim 1 “characteristic dimension of said patch elements being no greater than about 500 $\mu$ m, the average spacing between said patch elements being no greater than about 200 $\mu$ m and the combined emissivity of the substrate and patch elements being no greater than about 0.8 in the thermal infrared waveband”.

The examiner was apparently well aware that neither Brastad et al. nor Walters has an express teaching of the independent claim 1 patch dimensions. So all that the examiner could find to reply upon for disclosing the claimed patch dimensions is a generic catch-all statement in Walters that:

It is well within the ordinary skill of those in the art to select the particular material of the reflecting coating regions, as well as the physical dimensions of the region such as coating pattern, thickness, width and pitch, and control both the degree of impermeability, the degree to which the reflective coating regions will reflect microwave energy and the amount and distribution of microwave energy that is transmitted through the polymeric substrate in the gaps between the regions of reflecting material. Thus, food packaging incorporating the barrier film of this invention can be designed to be shelf stable and designed to subsequently heat food to a predetermined temperature . . .

(Walters at col. 6, line 64 to col. 7, line 8). This catch-all statement is not a teaching of the claimed dimensions as is required to establish a *prima facie* case of obviousness.

A *prima facie* case of obviousness cannot be constructed without a showing that all of the features of the claimed invention are found in the prior art. *See e.g., In re Rouffet*, 199 F.3d 1350, 1359 (Fed. Cir. 1998). In fact, there is no teaching in the cited prior art that could

hypothetically be combined to lead one of ordinary skill to arrive at Applicant's claimed patch dimensions. Indeed, the examiner's misplaced reliance upon the Walters catch-all statement as a replacement for an express teaching of the claimed patch dimensions cannot legitimately be taken to establish a *prima facie* case of obviousness for a variety of reasons. Firstly, the statement must be considered in the context of the reference as a whole. Walters expressly discloses dimensions which are almost an order of magnitude greater than those claimed. One of ordinary skill in the art – reading the catch all statement in the context of the entire Walters reference – would not understand the phrase to suggest a device with dimensions dramatically larger or smaller than the ranges recited in Walters. Secondly, the catch all phrase is not an express teaching of anything – simply put, the cited prior art does not disclose or suggest the claimed patch dimensions. Thirdly and finally, the examiner has not provided any reasoning why one skilled in the art at the time of the invention would have considered the catch all phrase relied upon by the examiner as an invitation to investigate patch dimensions almost an order of magnitude smaller than those recited in Walters. Simply put, the catch all phrase relied upon by the examiner in rejecting the claims does not satisfy the requirement for an express teaching of the dimensions in the prior art and claims 1-14 should be allowed for at least this reason.

**B. The Combination Of References Would Not Lead To The Claimed Invention**

Claims 1-14 are further non-obvious because the recited motivation for combining the references would – along with the catch all phrase regarding the dimension selection - not result in the claimed invention. While it is proper for the examiner to combine two or more references based upon solving a problem unrelated to the problem solved by the inventors in an application, the examiner's motivation for combining the references here would not have led to the claimed invention. In paragraph 10 of the Office Action, the Examiner points out that absent a showing of criticality with respect to “the dimensions of the metal patches”... it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the dimension of the patch... in order to achieve a microwavable cover sheet which has... the desired reflection of the microwave energy”. However “reflection of the microwave energy” is not something that the present applicant desires. Instead, the problem faced by the inventor and which also provides unexpected results of the claimed patch dimensions is to retain substantial microwave transparency despite the close proximity of the patches to the foodstuff to be heated. This

problem and unexpected solution is discussed in part at the first paragraph on page 4 of the application

The combination of references cited by the examiner and the motivation for combining the references would not have led one skilled in the art at the time of the invention to the claimed patch dimensions. Claims 1-14 are, therefore, patentable over the cited prior art for this reason as well.

### **C. The Examiner's Inherency Position Is Legally Flawed**

Claims 1-14 are independently non-obvious and patentable because the examiner's inherency argument is flawed. As an initial matter, the examiner's rejection must be withdrawn because the examiner's rejection relies upon the Brastad et al. packaging material for "intrinsically" possesses certain claim properties. (See para. 13 of the August 5, 2008 Office Action). There is no legal ground for a finding of obviousness based upon a claim feature that is "intrinsic" in the prior art. Therefore the examiner's obviousness rejection must be withdrawn on this basis alone.

The examiner's rejection is also legally flawed to the extent he might take the position that the claim features are "inherent" in Brastad et al. While MPEP 2112.01 indicates that inherency may provide a basis for an obviousness rejection, the requirement that the inherent property be found in a single reference remains – even for an obviousness rejection. Indeed, MPEP 2112.01 gives examples of and discusses inherency in the context of the teachings of a single reference in both the anticipation and the obviousness context. In order to sustain an inherency position, the examiner must show "that the structure recited in [a single] reference is substantially identical to that of the claims" (See MPEP 2112.01(I)). Here, the examiner claims that the Brastad article would "intrinsically reflect thermal infrared radiation and intrinsically possess emissivity as presently claimed." However, the examiner has admitted that the claimed article and the Brastad et al. articles have different patch dimensions. Therefore any inherency position that the examiner may raise on this basis will be without merit because the examiner cannot show that the claimed structure and the Brastad et al. structures are substantially identical.

#### **D. One Skilled In The Art Would Not Have Considered Walters**

The examiner's obviousness rejection of claims 1-14 also fails because Walters is not a reference that one skilled in the art at the time of the invention would be led to combine with Brastad et al. in the search for an improved microwave-transparent packaging material. In this respect the whole point of the present invention is a frequency selective surface that is adapted to pass microwave radiation. Brastad et al. is similarly interested in structures that pass microwave radiation. Walters, on the other hand, as shown by the very title of his patent, is interested in a microwavable barrier film. For example he says:

“the reflective elements are designed to have known microwave **reflectance** characteristics, thereby forming a **barrier** selectively permeable to microwave radiation and capable of **reducing** the amount of microwave energy that is transmitted through the microwave transparent material and into the environment of use” (column 2, lines 13-19)

“The means on the first substrate for **reflecting** microwave energy allows the **barrier** film to be selectively permeable to microwave energy, so that **only a portion** of the microwave energy received passes through the electrically insulative substrate to directly heat the packaged food” (column 2, lines 34-39)

“the term “selectively permeable” means that the **reflective** elements **reflect** the incident microwave radiation in such a manner as to **allow only some portion** of the impinging microwave radiation to pass through the substrate(s)” (column 3, lines 35-39)

“the array of microwave-**reflecting**, non-contiguous coating elements deposited on a surface of the substrate will **reflect or divert a large amount of microwave energy**” (column 6, lines 42-45)

Thus, one skilled in the art at the time of the invention who was interested in developing devices that pass microwaves would not consider a reference such as Walters that is directed to a references directed to microwave barrier materials. For this reason as well, claims 1-14 are non-obvious and patentable.

#### **II. TRAVERSE OF THE OBVIOUSNESS REJECTIONS OF CLAIMS 15-16**

The examiner also rejected claim 15 for being obvious over Brastad et al. in view of Walters and in further view of Yializis (USP 6,106,627). Finally the examiner rejected claim 16 for being obvious over Brastad et al. in view of Walters and further in view of Aindow et al. (USP 6,171,429).

Claims 15-16 are non-obvious and patentable at least by virtue of their dependence upon independent claim 1 which is allowable for the reasons recited in Section I above.

### **CONCLUSION**

Claims 1-16 are pending in the application and are allowable over the prior art as set forth above. Favorable reconsideration and allowance of all pending application claims is, therefore, courteously solicited.

Respectfully submitted,

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